# **GUIDE**



New sprayer designs allow the flow rates to be adjusted from the cab.

O A SNOW AND ICE management contractor, a truck is like a second home. Fifteen-hour workdays aren't uncommon, so having a comfortable, reliable vehicle is crucial. And, let's face it, equipment that allows the operator to spend a bulk of time inside the warm cab — and not out in the cold — is extremely valuable.

Just as trucks have evolved and become more durable, efficient and ergonomic over the years, snow and ice management equipment has improved as well. In recent years, plow, spreader

New designs to winter maintenance equipment keep contractors productive and in the cab.

BY BARRY TRUAN

and sprayer manufacturers have implemented several new features, designs and upgrades to existing equipment. Here's a look at some of the most significant developments and how they are having a positive impact on contractors' day-to-day operations.

## Lighten up

Perhaps the biggest advancement in recent years has been constructing equipment with lightweight, yet durable materials to reduce weight concerns. These significant weight reductions are beneficial to both the operator and the truck: Less weight from equipment equals reduced stress on the truck's ball joints and the vehicle itself, resulting in a truck that will last longer and require less maintenance. A contractor can spend more time in the cab — plowing snow and spreading or spraying deicing materials — and less time outside repairing the truck.

One example is the use of a material called Lexan. Originally used in the visors of space helmets, Lexan has continued on page 39



continued from page 37 become a popular material in plows for good reason: It weighs much less than traditional heavy-gauge steel.

Consider the effect on a 7.5-ft. plow. A steel-constructed unit of this size would weigh roughly 850 lbs. A Lexan-constructed model could weigh up to 90 lbs. less — approximately 10% lighter — than a similar sized, steel-built snow plow.

Many manufacturers are also trending toward polyethylene, another lightweight, yet durable material. For a typical salt and sand spreader, polyethylene construction can reduce its empty weight by as much as 40% when compared with a similar steel-built model.

These significant weight reductions not only increase the truck's longevity, but also give the operator more flexibility in terms of the amount of equipment he or she can carry or attach without exceeding the gross vehicle weight rating.

# **Spreading their wings**

Speaking of lighter weight, imagine being able to add 20 in. of blade width to a snow plow, while still keeping its weight to a minimum — all while pushing snow more efficiently. Thanks to the launch of plow wings in the past five

years, this is now possible.

Plow wings eliminate the need to angle a plow in deep snow by "cupping" the ends of the unit, which encourages snow to roll off both sides. A contractor doesn't have to spend time angling the plow, and the added length means the unit can clear more snow per pass, further increasing efficiency. In fact, it's estimated wings can reduce plowing time by up to 50%.

While wings are a perfect illustration of one of the more recent developments in equipment, this next feature is an example of a newer enhancement to an established plow technology.

#### Road trip

Plow manufacturers have been including a feature called a "trip edge system" on plows since the mid-

1990s. Its main function is to lower the impact force to the plow and eliminate potential damage to it and the truck when a trip hazard (such as a sewer cap or speed bump) is encountered. The unit features spring mounting, which tips the plow forward — also called "tripping over" — to avoid a hazard. A 4- to 6-in. cutting edge is attached to the bottom of the snow plow to further lessen impact.

This technology originally came with a drawback: The entire plow would engage in the tripping action. The bottom portion of plowed snow would be left behind, and the contractor would have to go back and replow. With newer advancements on some plows,

> just the cutting edge folds under when a trip hazard is encountered. The snow pile stays with the plow and the contractor doesn't have to go back and reclear lost snow.

This simple enhancement greatly improves efficiency during the workday. But the jobsite isn't the only place efficiency is important. For many, a work truck doubles as an everyday vehicle, so the ability to attach and

remove equipment easily is imperative.

### Easy on, easy off

Roughly 10 years ago, a plow, its lights and hydraulics all needed separate mounting. If a contractor wanted to use the truck for a quick trip to the supermarket, he or she would have to remove the plow, as well as the lights and hydraulics. Not only that, the process was time-consuming and very difficult for one person.

With today's newer mounting brackets, plow mounting and dismounting is faster and easier. The plow and its accessories are attached and removed as one unit.

This process has also been improved with current spreader technology. Consider a contractor who frequently needs his pickup for towing purposes.



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With some models, the spreader assembly must be unbolted — or the entire spreader must be removed from the truck's bed — before accessing the receiver hitch. Many manufacturers offer new designs to make this process easier. Some new systems mean a snow and ice contractor now only





has to remove one pin and the spinner assembly to expose the truck's hitch. The conversion takes place in seconds and can be done by one person.

These features are extremely beneficial for the many contractors who have multiple uses for their trucks. However, contractors still spend countless hours in these vehicles, so many demand a higher level of comfort.

#### Stay in control

Think of setting up an office or home workspace for ultimate comfort and productivity. Adjusting a chair to a certain height or ideally positioning a computer monitor and keyboard are examples of ways to make a workspace more ergonomic. For a winter maintenance contractor, the truck's cab is the office. So it's no wonder that plow, spreader and sprayer manufacturers have designed new control options to let users customize and make their workspaces more comfortable.

First, being able to control all equipment from inside the cab is a major benefit. Take sprayers, for example. Previously, a contractor would have to park, exit the truck, and venture out in the cold to manually activate or adjust the sprayer. But today's new in-cab control systems allow the operator to set liquid flow rates and activate the sprayer, all from the warmth and comfort of the cab. In-cab controls are also available for plows and spreaders.

Second, when in-cab controllers were first introduced, they weren't very user-friendly; many were only offered in the form of toggle switches. After several hours of flipping the switches,

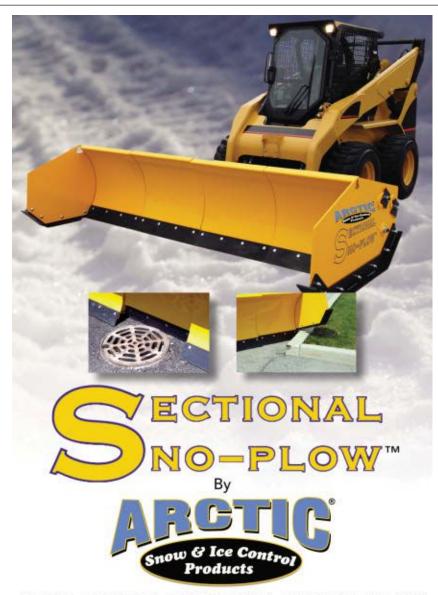
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continued from page 40 operators would be left with sore fingers and indents from the repeated on-and-off motion.

Fast-forward to the present, when one can choose from several easy-tooperate controllers. Options include joysticks, pistol-grip pads or simple rectangular pads that can be mounted to a dashboard or attached to the driver's leg. All of the available options let a contractor personalize his or her control setup, resulting in the most comfortable, productive "office" on four wheels.

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#### PROTECT THY TRUCK

Whether you're getting into the snowplow business or spending this winter's blizzards indoors, make sure you have the right insurance for your truck. Commercial auto insurer Progressive offers these tips.

- >> If you're planning to plow, call your agent or insurance company to make sure your truck is fully insured for its value, including the cost of a plow or other equipment. If you have a full coverage policy, you should be ready for the snow but check with your agent or insurance company to make sure.
- » If you're planning to store your trucks and want to save money on your insurance while you're not driving them, consider switching to a comprehensive-only policy. This coverage protects your vehicles against incidents like vandalism or hail that can happen when they're sitting for long periods during the off-season.
- >> If you decide to cancel your liability insurance, check with the department of motor vehicles first. There may be some additional steps you need to take to comply with the insurance laws in your state.

their trucks, improvements to the equipment — no matter how small — shouldn't go unnoticed. As engineering becomes more advanced, new features will continue to be implemented. Combine the aforementioned developments with inevitable future enhancements, and the day-to-day operations of these professionals will keep improving.

It's not a minute too soon. When a work environment includes below-zero temperatures, dangerous wind chills and unpredictable drivers, every extra minute spent inside the cab — and not outside working on the truck and its equipment — is extremely valuable.

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